

AMENDMENTS TO THE CLAIMS

1 (Original): A method of isolating a β (1-3) β (1-4) glucan from a milled cereal grain or a milled part of the cereal grain, comprising:

- (i) extracting the milled cereal grain or the milled part of the cereal grain with an alkaline solution to produce an extract containing at least about 0.4 weight percent β (1-3) β (1-4) glucan;
- (ii) removing insoluble material, and removing particulate material having a particle size of greater than about 0.2 μm from said extract to produce a purified extract;
- (iii) adding from about 10% to about 25% (w/w) of a $\text{C}_1\text{-C}_4$ alcohol to the purified extract to precipitate the β (1-3) β (1-4) glucan, and
- (iv) isolating the β (1-3) β (1-4) glucan.

2 (Original): The method of claim 1, wherein, in said step of adding (step iii), about 10% to about 20% (w/w) of an alcohol selected from the group consisting of methanol, ethanol and isopropanol, is used to precipitate the β (1-3) β (1-4) glucan from said purified extract.

3 (Original): The method of claim 2, wherein about 10% to about 20% (w/w) of ethanol is used to precipitate the β (1-3) β (1-4) glucan from said purified extract.

4 (Original): The method of claim 1, wherein, said step of removing particulate material comprises:

one, or more than one step of adding a flocculant, a coagulant or both a flocculant and a coagulant to said extract to coagulate particulate material having a particle size of greater than 0.2 μm , and removing coagulated material from said extract;

digesting starch material in said extract, and

filtering out particulate material having a particle size of greater than about 0.2 μm from said extract to produce a purified extract.

5 (Original): The method of claim 4, wherein, in said step of digesting, said starch material is digested with an enzyme.

6 (Original): The method of claim 5, wherein prior to digesting said starch material, said alkaline solution is neutralized.

7 (Original): The method of claim 6, wherein following the digestion of said starch material, said enzyme is inactivated.

8 (Original): The method of claim 7, wherein said enzyme is inactivated by acidifying the neutralized solution.

9 (Original): The method of claim 5, wherein said enzyme is an amylase.

10 (Original): The method of claim 9, wherein said amylase does not require a calcium cofactor.

11 (Original): The method of claim 1, wherein the cereal is selected from the group consisting of cultivar of barley, a cultivar of oat, a cultivar of wheat, a cultivar of rye, a cultivar of sorghum, a cultivar of millet, and a cultivar of corn.

12 (Original): The method of claim 1, wherein the pH of the alkaline solution is from about 9 to about 10.

13 (Original): The method of claim 1, wherein said step of extracting (step i) is carried out over a period of from about 15 to about 45 minutes.

14 (Original): The method of claim 1, wherein said step of adding (step iii) is conducted at a temperature of from about 1°C to about 10°C.

15 (Original): The method of claim 1, further comprising one, or more than one step of dissolving the isolated β (1-3) β (1-4) glucan in an aqueous solution, precipitating the β (1-3) β (1-4) glucan by adding about 10% to about 25% (w/w) of the C_1 - C_4 alcohol to the aqueous solution, and isolating the β (1-3) β (1-4) glucan.

16 (Original): A method of isolating a β (1-3) β (1-4) glucan from a milled cereal grain or a milled part of the cereal grain, comprising:

(i) extracting the milled cereal grain or the milled part of the cereal grain with an alkaline solution to produce an extract comprising at least about 0.4 weight percent β (1-3) β (1-4) glucan;

(ii) removing insoluble material, and removing particulate material having a particle size of greater than about 0.2 μm from said extract to produce a purified extract, wherein the step of removing particulate material comprises;

one, or more than one step of adding a flocculant, a coagulant or both a flocculant and a coagulant to said extract to coagulate particulate material having a particle size of greater than about 0.2 μm , and removing coagulated material from said extract;

enzymatically digesting starch material in said extract, and

filtering out particulate material having a particle size of greater than about 0.2 μm from said extract to produce the purified extract;

(iii) adding about 10% to about 25% (w/w) of a C_1 - C_4 alcohol to the purified extract to precipitate the β (1-3) β (1-4) glucan, and

(iv) isolating the β (1-3) β (1-4) glucan.

17 (Previously presented): A β (1-3) β (1-4) glucan, composition comprising at least 75% β (1-3) β (1-4) glucan, less than 10% ash impurities, less than 10% protein impurities, and less than 5% lipid impurities, wherein the β (1-3) β (1-4) glucan has a particle size of equal to or less than 0.2 μm .

18 (Previously presented): The β (1-3) β (1-4) glucan composition according to claim 17, wherein the composition comprises at least about 92% β (1-3) β (1-4) glucan, less than 3.5% ash impurities, less than 3.5% protein impurities, and less than 1% lipid impurities.

19 (Currently amended): A β (1-3) β (1-4) glucan composition prepared according to the method of ~~any one of claim~~ claim 1 to 16.

20 (Currently amended): An aqueous composition comprising the β (1-3) β (1-4) glucan composition of claim 17, ~~18 or 19~~.

21 (Previously presented): The aqueous composition according to claim 20, wherein the aqueous composition has a clarity of from about 5 to about 100 NTU.

22 (Currently amended): The aqueous composition according to claim 20 ~~or 21~~, further comprising from about 1% to about 40% by weight of a freezing point depressant.

23 (Previously presented): The aqueous composition of claim 22, wherein the freezing point depressant is selected from the group consisting of glycerol, propylene glycol, butylene glycol and pentylene glycol.

24 (Currently amended): The aqueous composition of claim 22 ~~or 23~~, wherein the β (1-3) β (1-4) glucan is present in an amount of from 1.2% to about 1.6% by weight.

25 (Currently amended): The aqueous composition of claim 22 ~~or 23~~, wherein the β (1-3) β (1-4) glucan is present in an amount of from about 1.2% to about 1.3% by weight.

26 (New): An aqueous composition comprising the β (1-3) β (1-4) glucan composition of claim 18.

27 (New): An aqueous composition comprising the β (1-3) β (1-4) glucan composition of claim 19.